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ABSTRACT

This paper examines action research that has been carried out in organizations consisting of predominantly highly educated personnel. The paper revolves around discussion of the Scandinavian model of action research, asking to what degree this model, which has been developed within the framework of industrial democracy, might also serve as a guideline for development projects in professional work. The paper summarizes experiences at the Oslo Work Research Institute (WRI) of development projects on ships (emphasizing the position of ships' officers), at a university, a large hospital, and a group of high technology plants. It also provides a short history of Norwegian action research in working life. A table summarizes five of WRI's action research projects in organizations with relatively highly educated labor forces. The paper proposes that action research is difficult when it is done in a field characterized by power struggles between professions. It proposes that the research must not become too compartmentalized but must include connections between training and working life, concluding that action researchers must position themselves within an unclear field of crossing and contiguous interests. Such a task demands a greater degree of reflexivity than has been usual in the Scandinavian model for action research. (36 references) (KC)

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ACTION RESEARCH IN PROFESSIONAL WORK: DEVELOPING NEW PRACTICES THROUGH DESIGN, DIALOGUE OR LEARNING?

In this paper I shall be taking up action research which has been carried out in organizations consisting of predominently highly educated personnel. The theoretical theme tune which pervades the paper is a discussion of what is often referred to as "The Scandinavian Model" (Thorsrud, 1984; Gustavsen, 1990) of action research of which many variants exist. A key question, then, will be to what degree this model, which has been developed within the framework of industrial democracy, might also serve as a guideline for development projects in professional work.

I intend to go through in a summary fashion experiences made at the Oslo Work Research Institute (WRI) of development projects on ships with the stress on the position of the ship's officers, at a university, a large hospital and a group of high technology plants.[1] I shall use this material as an epirical point of departure for my reflections concerning research strategies in participant based action research.[2] Several researchers have drawn up a boundary line between, on the one hand, an experimental orientation or design approach with roots going back to both Kurt Lewin and socio-technical system thinking and, on the other, a dialogical approach which has been influenced by the social philosopher Jürgen Habermas (1984) and democracy theory (Gustavsen, 1990; Whyte, 1991).

Max Elden (1983), now together with Morten Levin (1991) has launched his "own version" of participatory action research by utilizing elements from Chris Argyris' and Don Schöns' (1985) action science. I shall refer to this as a "learning perspective" since its spokesmen are concerned with how practitioners and researchers together create a "local theory" which has as its point of departure their

[1] The author has himself participated in all of these projects except the hospital case.

[2] I shall be using the names "action research" and "participatory action research" somewhat indiscriminately since the degree of involvement in the research process which is employed to characterize the participatory variant (Whyte et al., 1991) is an important theme in this paper.

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different framings of the situation. They call this process "co-generative learning", something which presupposes the rather strong involvement of the researcher in whatever the employees are concerned with. He or she becomes so decidedly a participant in the process of change and ought, methodically speaking, to be prepared to incorporate this reflexively in his or her own research strategy. Here we touch upon questions which are of central importance in anthropological fieldwork but which, as I shall demonstrate, are not thematically incorporated within the framework of "the Scandinavian Model". I regard such a theoretical "blind spot" to be a weakness when action researchers perform development work in organizations with highly educated people where a more "verstehende" framework appears to be necessary.

Before I deal with the main presentation itself, I shall, in the following paragraphs, sketch a short history of Norwegian action research in working life which, in the main, runs parallell with the history of the WRI.

Participatory democracy and action research; the Scandinavian scene

Already in the early sixties there was forged a bond between Norwegian working life researchers and the Tavistock Institute of Human Relations in London. The socio-technical studies in Indian textile industry and English coal mines received recognition in working life research even though the Tavistock group had not managed to achieve practical reforms at a national level. A number of historical and cultural factors - which I cannot elaborate here - were contributory to the fact that Norway came to play a significant role in the realization of the socio-technical project. The Australian, Fred Emery, who was at the time with the Tavistock Institute, constructed, together with Einar Thorsrud, a series of experiments with semi-autonomous groups in Norwegian industry. The Industrial Democracy Project was born.

It is worth mentioning that these development projects, which, in the beginning, were called "field experiments"[3], were viewed firstly as a practical test of a participatory-democratic model - as an alternative both to state ownership of the means of production and worker's control by means of formal representation

[3] Kurt Lewin's experimentalist mode of thinking and his field theory came to influence the sociotechnical tradition in Norway (see f.ex. Herbst, 1970). The term "field experiment" went out of use during the seventies and was gradually replaced by "action research".

(Emery & Thorsrud, 1976). Secondly, this programme which, in Norway, was known by the term "The Participation Project of the Norwegian Federation of Trade Unions (LO) and the Norwegian Employers' Confederation (NAF), was more than a collection of disconnected attempts in workplace democratization since they were a part of a long-term and broad effort at a national level. From the beginning, the researchers project ideas were discussed, and plans laid, in cooperation with the Joint National Committee which represented parties involved in working life and which came to play a decisive role in both experimental activities anddissemination work. This cooperation on a national level was also recreated at the individual field site in tripartite constellations consisting of unions, company leadership and research group. For the researchers, this organizing implied that they, to a considerable extent, had to work via such committees at the local level.

It is, of course, impossible here to go into the many "field experiments" in Norwegian industry from the middle of 1960 to far into the 1970's, and I must refer the interested reader to Einar Thorsrud's review from 1984. Briefly speaking, the experimental sites consisted of both smaller engineering enterprizes (metal manufacturers) and key industries (major fertilizer plants) with many thousands of employees at the same time that the reform work also came to include new industrial branches such as the merchant navy and off-shore oil industry (Qvale, 1985). Since I am, in this paper, more concerned with the role of the researcher and with methodical questions than the concrete results of the Industrial Democracy Project, I will let an American social-psychologist, Max Elden (1979), describe some of the crossroads in Norwegian socio-technical research. He speaks of three generations superseding one another.

The first generation to make its mark is the "sleeping-bag generation" and the forerunning pioneering effort (from 1962 and onwards) with researchers who almost lived in the factories and who were engaged with finding good solutions to socio-technical problems such as, f.ex., a more "organic" work organization adapted to a novel and integrating technology. These researchers saw themselves in this phase as experts while those belonging to the "tool generation" (early 70's) became gradually more interested in developing methods which could contribute to an optimalization of the organization design. The next big leap, the "do-it-yourself-generation", was to leave such tools to the local members who then could develop their own organization. The researcher's task was to make himself redundant while the practitioners learned to learn by means of their own trial or

test activities. Design thinking thus drifted somewhat into the background, but the researchers still retained the key to successful development work.

To bring this historic summary up to date, I shall, as have others, add on a fourth generation of "process facilitators" (Räftegård, 1991) which made a radical break with the experimental model - something to which I shall return more closely in the following section.

Action research in work life and democratic dialogues

In the circle of participatory based action researchers it is not uncommon to describe an "action cycle" and a "research cycle" in terms which strongly recall a rational decision making model (see f.ex. Walton & Gaffney, 1991). If a naturalistic experiment is constructed upon such a mould, it may be programmed in the following way.

Firstly, the problem is defined, f.ex. dissatisfaction at work, high absenteeism, then the causes are discussed. When the diagnostic work has been done, suggestions for remedial counter-measures are formulated. In conjunction with the Industrial Democracy Project the answer was very often that one desired a debureaucratization by letting workers circulate between jobs, participate in planning and control tasks as well as establishing partially self-governing groups. The chosen solution was then tried out and evaluated so that the researchers and the local members acquired a new understanding of the problems at the same time that it provided a basis of knowledge for expansion to other parts of the same organization or for dissemination over a greater area - as an example to follow. This was not always equally successful (Walton, 1985).

As a caricature one might say that the experimental orientation which still may be found in much of the action research literature (Susman & Evered, 1978; Karlsen, 1991), rests upon the supposition that arguments and responsive actions follow after one another in an ordered sequence where every step is logically anchored in the preceeding step. Both as a general description of human actions (Garfinkel, 1967) and of scientific practice (Knorr-Cetina & Mulkay, 1983), this problem-solving model has limited validity even though it may have certain prescriptive advantages. The most important thing from my point of view is is, however, that this approach places much of the initiative into the hands of

researchers who insist upon scientific rigour. Already Rapoport (1970) was suggesting that such demands could result in a conflict with the practical relevance of the research.

A central point in the dialogical approach which has gained a foothold in Scandinavian action research (Gustavsen, 1990), is that the development process does not start with a problem clarification but rather with an activating of the local participants in the exposure of a multiplicity of problems, solutions and methods. In Figure 1 I have placed the experimental orientation on top and the dialogical beneath. In the following I shall concentrate on the latter.

In harmony with the "pragmatic turn" within humanioria and the social sciences, concepts such as "dialogue", "discourse" have become usual in action research literature.[4] More and more, researchers seem also to be positioning themselves in relation to the German social philosopher Jürgen Habermas (se Carr & Kemnis, 1986). What characterizes the approach of Björn Gustavsen er is an underscoring of democracy theory and a multilevel strategy for the development of the working life.

THE EXPERIMENTAL ORIENTATION	
PROJECT COURSE	PROBLEM→ANALYSIS→SOLUTION→DECISION→IMPLE→EVALUATION MENTATION
RESEARCH CONTRI-BUTION	CONTENTS (Experts on job design, work organization)
THE DIALOGICAL ORIENTATION	
PROJECT COURSE	DIALOGUE→PROBLEM→CONCLUSIONS→TESTING→INSTITUTION- SOLVING METHODS ALIZATION
RESEARCH CONTRI-BUTION	FORM/PROCEDURES (Organizer and network)

Figure 1. A schematic representation of project course and researcher contribution according to an experimental and a dialogical orientation (adapted from Räftegård, 1991).

[4] The scientific action programme of Chris Argyris (1985) must also be considered as being based on a dialogical orientation.

The key concept here is "democratic dialogue" which Gustavsen defines more closely as a combination of principles for "non-repressive" communication and practical experiences with action research. The criteria are partly definitorial and partly normative (Gustavsen, 1990). Of these, I would first mention what also generally characterizes "open" communication: all the concerned parties to the work of change must have the possibility of participating on the basis of their own work experiences, all participants are given the same standing, etc. Secondly, I would specially mention the demand that the dialogue shall make allowences for a large degree of dissent at the same time that it ought to lead to practical action and binding agreements.

According to Gustavsen, the last two characteristics point towards the democracy tradition's two forms of influence, namely choice and dialogue which are inseperably bound to each other because the practice of the right to take part in elections presupposes that the individual has the ability to choose rationally and correctly according to his/her situation and interests - an ability which is associated with debate or exchange of opinions. The dialogue is also a method for the peaceful and constructive resolution of conflicts. It is a completely essential function of a democratic system to be able to unite disagreement by common practical action (Gustavsen et al., 1991).

These criteria of dialogue have been sought operationalised in a conference form (Gustavsen & Engelstad, 1985) which implements and extends ideas from system thinking (so-called "search conferences", see Emery & Emery, 1978). To put it briefly, such gatherings are formed on the basis of the following principles: (1) The participants are project groups from one or more enterprizes - often put together in the form of "vertical slices" with representatives from executive management, section leaders, the staff, the employees' organisations and the workers. These groups can be put together in homogeneous fashion, i.e. all workers together in one group, all work leaders together, etc. Towards the end of the conference it is usual to group the participants together in such a way that they create effective working groups for the furtherance of development work at their work place. (2) No lectures or other authoritative techniques are made use of at the conference which is organized around the various themes brought to the table by the participants. (3) The time factor is important since complex and vaguely specified questions must be dealt with within tight time schedules. (4) The participants alternate between two ways of working: discussions in the smaller groups and the consequences which are drawn here are presented in a plenary

meeting as the results of the conference. (5) The conference staff consists of representatives of the various parties, often including action researchers, and their job is to adapt a structure and formulate some general tasks as well as arranging groups and intervene if the "open" tactic grinds to a halt. Even though these points are more or less obligatory items in dialogue conferences, such gatherings will serve different functions dependent upon where in a course of development they take place, f.ex. as the starting point of a project, as a forum for recurrent exchange of experiences and as a step in evaluation activities.[5]

Viewed in relation to a strictly experimental logic, the working forms which are built up around the democratic dialogue will create a loosely organized theme-chart of problems, perspectives and solutions. The development work is thereby presented with many points of departure at the same time that it is difficult to map out the process beforehand. On the practical level this means that one should attempt to direct a development which proceeds along several tracks at once instead of just one (Gustavsen, 1990). A project in a machine shop can thus comprise logistical questions, new technology, work roles, achievement demands, training, administrative and guiding systems etc.

In Figure 2 I have, in abbreviated form, contrasted the dialogical approach with both design thinking and a learning perspective. This arrangement has an heuristic function when I later shall discuss some of WRI's projects in professional work. In particular, it has been difficult to "insert" the more hermeneutical learning approach.

[5] As a part of the "Quality of Working Life" movement in the USA, there have been arranged so-called QWL-conferences which, however, depart somewhat from the dialogue conference model in several ways since their aim is to train the participants in problem solving compentance. This training is tied only to a small degree to the participants' everyday problems.

RESEARCH STRATEGIES / METHODO-LOGICAL CONSIDER-ATIONS/ROLE OF RESEARCH	DESIGN APPROACH	DIALOGICAL APPROACH	LEARNING PERSPECTIVE
PROBLEM SOLVING LOGIC	Linear	Interactive	Circular
STRATEGY FOR CHANGE	One stepped	Step by step	Gradual
PROBLEM FORMULATION	One point of departure	Many points of departure	One point of departure
LINE OF DEVELOP-MENT	One activity at a time	Parallell activities	One activity at a time
ACTION LEVEL	Multi-levelled	Multi-levelled	Single -levelled
PROJECT LEADER-SHIP	Few	Many	Few
RELEVANCE OF KNOWLEDGE	General relevance	Local relevance	General/local relevance
EXPERTISE	Contents/process	Process/form	Content's form

Fig. 2. A simplified view of 3 positions in an action research strategy.

To the degree that the learning perspective is intended to enhance mutual understanding of situations and possibilities of action (a "local theory"), then it may be described as a circular process which, against a backdrop of prior understanding, creates new knowledge which so becomes the cognate springboard for further learning. This can be a gradual movement. In addition, learning theoreticians are

usually pessimistic regarding learning from complex and simultaneous parallell activities. If I connect this to Argyris & Schön's (1978) organization learning, the interventions will, to a great degree, be at the micro-level at the same time that the de-learning process is directed by the process consultant. The latter breaches the demand of the dialogue approach regarding "broad cooperation" - also in the project leadership.

While the socio-technical system perspective claimed general validity, it is part and parcel of the new paradigmatic shift that scientific knowledge does not have any privileged position in relation to people's everyday experiences when such inputs are meant to further a task of practical reform. Even general theories would have to be adapted to the situation to be operative knowledge. As already intimated in Fig. 1, the basis of design thinking was a set of presuppositions about the "good organization", whilst Gustavsen's reflections over the "democratic dialogue" provides few such footholds. Instead, relatively general procedures for how one may achieve broadly laid out processes of change are put forward. This may also be interpreted as scepticism to an approach which seeks "proximity" to the field either with the aim of being able to understand them from the inside or to lay claims to be able to comprehend a "deeper structure", to present them in a novel perspective. The question is whether they are in need of <u>even more</u> descriptions from outside.

Following this discussion I shall list certain reservations which are tied to the dialogical mode of thought and practice where trial activities comprise local participants who have higher educational backgrounds. (1) It is difficult to create the "superstructure" consisting of the various parties which was typical for the Industrial Democracy Project and for later research programmes in Scandinavia such as LOM (in Sweden) and HABUT (in Norway). Academic workers are often affiliated on an individual basis to a multiplicity of professional associations which have no organization on the local level. (2) Fraternal and personal networks are, in addition, specialized and global in that they transverse enterprizes and institutions, a fact network strategies of organizational intervention must take into account (Brock Utne, 1979). (3) The education system maintains and guarantees certain standards of professional competance and practice which in their turn presupposes a particular functional division and job organization of academic labour. Measures at work places will therefore have to include the relevant educational institutions. (4) Being able to partake in democratic dialogues and project activities can, of course, be an exciting experience for employees who have

a good deal of routine work to do. On the other hand, such an opportunity will not have the same "liberating" value for professional workers who may perhaps not experience performance compulsion as problematical as indecisiveness and reticence when something has to be done. (5) If it happens to be the case, as Alvin Gouldner (1979) suggests, that intellectuals insist on retaining the possibility of "critical discourses", then the distance between word and deed may be large. At the same time, it is, in this sector of working life, particularly difficult to maintain a fundamental division between instrumental rationality in on-going work and everday life's communicative forms of rationality (Habermas, 1971). The use of language is not only a necessary productive element in much professional work, but also a way of positioning oneself in relation to colleagues and groups. Communicative actions become infiltrated with strategic concerns (Giddens, 1979).

In the next section I shall be keeping these points in mind when I review some of our experiences of action research in organizations with highly educated personnel. How do the principles of democratic dialogues function? Is it possible to maintain a procedure-based adaptational role? How should one plan network construction in these types of contexts? And what types of alliances are important for the researcher to engage in?

Action research in professional work

As already mentioned, I will not, in the following, pursue a detailed account of the "substance" of the trials, but rather concentrate on methodical questions and the slowrole of the researcher.

The Project Ships (1962 til ca. 1982) are regarded as one of the pioneering efforts in action research (Walton & Gaffney, 1991) and were a part of the national Industrial Democracy Project. The major concept behind these field experiments [6] was to transfer the principles of self-governing groups to the relatively rigid structure of the ship's organization - and to develop so-called "self-governed ships". The programme was formed as a classical socio-technical field trial where the

[6] The shipboard organization was in many ways ideal for socio-technical experimenting in that it, like the small groups of the English mines, consisted of workers who had to manage a good deal on their own simply because of the physical distance from the commando centre (the on-shore main office).

research team went in with expert-directed analyses of technology, the work organization and quality demands. On board, the measures which were implemented included an organizational foundation for greater cohesion between the crew, and an improved coordination of work tasks. The subordinates' work situation appeared to change in important respects in that they were brought into the planning processes at the operational level at the same time that the work area was extended, something which presupposed generalist competance among the general purpose ratings.

The ships' officers and their trade unions were often sceptical to the shipboard changes and resisted several of the measures. There are several reasons for this. Firstly, they were rather unwilling to transfer responsibility and work tasks to subordinates. Secondly, it was difficult to create acceptance for increased role flexibility in the officer's group while the traditional departmental divisions between deck and machine-room were maintained. Attempts were made with shipboard management teams but these types of alterations stranded as long as the on-shore inspectors had not integrated their tasks in like manner. The whole of the shipping company's organization was made the subject of debate and drifted in the direction of increased decentralization and integration[7]. Thirdly, the positions of the ships' officers, their work tasks, qualifications and career patterns were bound up in international certificates which, in their turn again, presupposed a particular theoretical schooling. WRI considered themselves, therefore, obliged to contribute to the development of a new multidiciplined maritime officer's education and made use of the opportunity which emerged when a decision was made to relocate this education as an element of the Norwegian high school system [8].

To be able to achieve a renegotiation of qualification demands, working agreements on board, formalized working arrangements in connection with each particular trial, a contact group was established which was partially made up of

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[7] The new inspector role implied a more complete responsibility for the boundary phase between ship and land, and some shipping companies went further in this integration process by putting project groups in full charge of certain types of ship. After a while, such management forms, marketed as "decentralized ship management", became very common in Norway, Sweden, Denmark, Holland and, to a certain degree, in England as well. Also in Israel, Japan and the USA field trials in this direction were implemented.

[8] The multi-discipline profile was temporarily weakened in the final version for the maritime education in that the students divided themselves among the various courses in machine, nautical subjects and electro-automation after a short period of common tuition. At a lower level one gained a greater acceptance for a generalist competance in that the training for able seaman and engine mechanic was replaced by a common ship's engineers training.

particular trial, a contact group was established which was partially made up of representatives from the various parties but which also consisted of key persons who were especially interested in the new management forms. Around this group arose an informal network of people from the shipping companies who were most active in the project.

By way of introduction to this presentation of the field trials in the shipping industry, I mentioned that they veered in the direction of socio-technical design thought. In Figure 4 I have plotted in how the local participants enter the research process. The crew was brought in for clarification rounds concerning the problem situation and could thereby correct or supplement the versions which were given by outsiders. The seafarers were also given the opportunity of participating in the concretizing of the action researchers' suggestions and had, of course, a major responsibility for carrying out the measures. On the part of the researchers, it was stressed how important it was that the seamen attained an owner's relation to the project. These, together with other employees of the shipping companies, had a particularly important function in the evaluation of the trial operations.

RESEARCH PROCESS	PROBLEM FORMULATION>	MAPPING>	ANALYSIS>	ACTION>	TESTING>	EVALUATION
	↑	↑		↑	↑	↑
OUTSIDERS CONTRI-BUTION	Triangulating function	Mobilizational function		Concreti-zational function	Execu-tional function	Learning function

Fig. 4. The participation of local members in the research process.

As mentioned, the democratization of the research process is often provided with a functional reasoning in that one underlines the importance of the process resulting in a "self-supporting learning process" for the local participants. Seen practically, this means that they themselves should be able to make systematic observations of what they do and evaluate such data against criteria they have developed themselves. This comparison and following causal analysis becomes then the empirical basis for new attempts. As far as I know, such a learning process was never built into the new ship's organization, something I believe was caused by the high turnover of personnel at sea and the status of casual labour which characterizes many sailors' work situations. It was impossible to invest energy and resources in protracted involvement in working for change

and the building up of competance when one had to start all over again every time the crew was replaced.

It is clear that if one goes through the Norwegian ship trials then one will recognize elements which in Fig. 2 are found under the dialogical approach. I have already broached the relatively strong superstructure at the branch level; especially the contact committee was a mainstay in the development of networks. It initiated the so-called "ship-meets-ship" conferances which gathered together the ships and the companies which participated in the trial work. Questions of common interest were clarified, experiences exchanged and new initiatives planned, f.ex. in respect of the educational system and the certifying authorities.

I would also mention the so-called "start-up conferences" for the sailing crew and other company employees when new ships were to be launched or new management systems were on the drawing board for existing ships. The future crew was invited to discuss everything from the design and layout of cabins and common areas, to the use of maintainance systems and the distribution of roles among the ship's leadership. It was also absolutely essential that the various work groups ended up with binding plans of action. These workshops were constructed in the same mould as the dialogue conferences.

WRI's ships' programme ground to a halt in the beginning of the eighties partly as a consequence of the fact that large parts of the Norwegian merchant fleet "flagged out" and registered under flags of convenience. The shipping industry gained, thereby, access to cheap labour power, and interest in building up an efficient and competent crew dwindled. At the same time, observers of this trial work seemed to agree that this action research contributed to a more efficient organization on board and an improved working environment for men at sea (Walton & Gaffney, 1991).

What, in my discussion, is of value to stress, is firstly the "long detour" which it was necessary to take to be able to do anything with the officers' professional roles. Not only was it necessary to negociate new standards for the discharge of duties and control on board and in the company organization, but one endeavoured to reorganize the whole training system. Nevertheless, it was among the officers and their unions that resistance to these attempts was greatest. Two of those who are well acquainted with the Norwegian ship trials, the Dutch researcher Jacques Roggema and the English researcher Malcolm H. Smith, reach

the conclusion that one was not fully aware of how deeply the officers' self-image and professional practice were bound to what were asserted to be fundamental professional values (Roggema & Smith, 1981). In the departmental scheme lay, more or less, the template of the career ladder which appeared as a firm foothold for the men at sea whilst much else was under continual revision and change. This type of cultural perspective on a ship's society is not delineated by the socio-technical analysis.

The Ullevål Project is an action research project at the largest hospital in Norway (with 4356 regular employed and 1230 beds). WRI was contacted in 1983 to assist in charting the working environment[9] and elucidating the reasons for the high degree of absenteeism and turnover of personnel. We were asked, in addition, to assist in the organizing of the more action- centred work so that the hospital and the individual ward could do something with the problems.

At the same time, a directive from the owners, Oslo city council, ordered the hospital leadership to initiate goal-management on all levels[10]. One attempted to get the two processes to flow simultaneously. On the part of WRI one argued that a strategy that was built on "broad cooperation" had to be viewed as complementary to the leadership-directed intiative. Local ward committees were established on all wards at the hospital. These consisted of representatives for the administration and the unions and had a major responsibility for the charting and following up of the working environment in their own wards. In addition, a "top-heavy" governing group and a coordinating working group were formed which WRI was in close contact with - as it was with several of the local development projects.

A type of internal network constellation emerged as a side-effect of the fact that the ward committees which handled similar types of problems came together in a work-environment forum of which there were nine, all in all. At these

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[9] In 1977 a law on the working environment was passed in the Norwegian parliament which included stipulations concerning the psycho-social working environment and which was inspired to a large degree by the Industrial Deomcracy Project at the same time that the law decrees that the employees shall partake in both the mapping and development of their own environment.

[10] Goal-management is a Norwegian version of "management by objectives" (MBO) which was imported from the oil industry (construction of oil platforms) to the civil administration where it blossomed in the middle of the eighties but which also triggered high-powered resistance, especially in the universities.

meetings the aim was to provide an opportunity of exchanging and discussing problems and solutions as well as devising a systematic training of the project participants. The work-environment fora became, in many ways, the "powerhouse of the action training programme" (Jacobsen, 1989, p.54).

WRI's researchers partook in the construction of these "arenas" whilst they, at the same time, participated in a more concentrated fashion in three trial wards (the surgical, gynecological and psychiatric wards) - in what became called "optimalization trials"[11]. These started during the autumn of 1988 and were intended to span a three year period. At two of the three project areas, the staff were reorganized so that the services became (1) adapted to the needs of the patients in a more flexible manner, and (2) adjusted in relation to on-going plans. A number of working groups which had relatively defined tasks, f.ex. EDB development, organizaing of routines, redecoration and maintainance, were started parallelly. The aim of this broad mobilization was, of course, to solve a number of problems, - but just as important was the use of these opportunities to improve communication between the several professional groupings and to consolidate the individual in respect of the main goals.

At Ullevål Hospital the action researchers wore many hats. (1) As mentioned, the WRI participated actively in the construction of an "infrastructure". (2) The research team took on itself the task of charting the working environment with the help of, among other things, survey methods, while they supplemented such descriptions with analyses of patient flow and queue formation. (3) A certain weight was placed on increasing the ability of the personnel to describe and analyse their own work organization (cp. the "do-it-yourself-principle") in that they received training in work process analyses and the writing of systematic daily journals. (4) The researchers had to be prepared to intervene in processes on a micro-level. For example it became apparent that it would be difficult to get anything done at the psychiatric ward before the outsiders had got the staff to clarify for each other what sorts of expectations they had to the other groupings. This became a laborious process which I shall refrain from going into here, but would mention that the result of the working-over was a new "psychological

[11] With the term "optimalization trials" one is attempting to couple the idea of a socio-technical optimalization (of two systems) with a more participant based perspective. One surmizes that quality criteria are created when the local members agree amongst themselves what is to be subsumed under the term "best possible" (Sörensen & Grimsmo, 1989), something which may remind one of the principles of co-generative learning.

contract" by which the various professions created boundaries between, on the one side, what was understood as a common responsibility area where all could contribute, and, on the other side, specialized competance.

Contributing to mapping activities in a development programme can be a double-edged sword when the recipients are academics. On the one hand we do not wish that such commissioned research becomes an authoritative element in the process, but, on the other hand, it is usually expected that such research commissions can document "what we already knew". It becomes, thereby, possible for the insiders to deliver a more convincing argumentation that something must be done with the problems. The consequence can be that they place very high methodical demands on the researchers' work and that such questions stay in focus during the feedback given to the local participants regarding their observations and analyses. The latter's experiences tend thus to recede into the background. These types of mechanisms are also reported from the Ullevål project (Sørensen & Grimsmo, 1989).

The University Projects. WRI was contacted in 1986 by the Institute of Social Anthropology at the University of Oslo (Norway's largest university) and asked to do a work environment investigation in a situation in which the institute experienced a rapid increase in the number of students and had been given new tasks in relation to researcher training and scholarship systems. The mapping itself was carried out in the form of semi-structured interviews and was given a low profile since the major aim was to activate the staff and students in the development of their own research and study environment.

The WRI researcher attempted to contribute to this mobilization by (1) establishing local groups which could participate in the planning of the investigation, in feedback and, not least, in the follow-up work, and (2) preparing a workshop where the contributions of the participants were to result in plans of action and a task priority list. (3) In addition we partook in the planning of a couple of follow-up seminars where WRI researchers were attributed the role of "stage managers" and external commentators. The project was now called "The Revitalization Project" and during 1988 the staff, together with a handfull of students, were busily employed in realizing the plans which were intended to improve the situation.

With the successful results from the Institute of Social Anthropology as a background, the WRI received a request from the Institute of Sociology (ISO) at the same university to help do something similar for them. Now it soon emerged that the sociologists had far from clarified the goals for the development project. We were obliged to go through several rounds where these points were negotiated. The institute administration, a couple of the teachers, and the student representatives were concerned with the quality of teaching in a period with increasing numbers of students and with new tasks in the training of researchers etc. On this point their objectives were similar to those of the preceeding project at the Institute of Social Anthropology. There were several persons among the scientific staff who, together with the institute administration, housed a desire that the institute and the subject of sociology should become more aggressive and make itself more noticeable both nationally and internationally.

At about the same time that we received the inquiry from ISO, there was an on-going discussion concerning the reorganization of the whole of the University of Oslo - towards larger units, new management systems and increased local influence over resource distribution. What became particularly difficult for many of the employees to swallow was the goal-management philosophy which was partly understood to be an uncritical use of models taken from the industrial and business sector. One feared in addition that these management principles could represent a threat to professional autonomy. Such points of view had their representatives in the collegium at ISO whilst the institute administration wished to utilize this somewhat open-ended situation to reflect upon the future organizing of the institute. WRI's researchers admitted a certain scepticism regarding the goal-management paradigma and I believe that many of the staff of ISO experienced our strategy as an alternative. This was not as clearly formulated as at Ullevål Hospital where they accepted "broad participation" as complementary to the reform work intiated by the hospital administration.

Taking into consideration the widely spread criticism of industrial models at the university, it seems paradoxical that our intention of viewing ISO as a production system was well received in our contact group. There can be several reasons for this. Firstly, we were clearly associated with a socio-technical mode of thinking so that ISO thereby received what they were expecting. Secondly, the metaphor was launched with a self-ironic sting in that we at the same time let the message trickle down that ISO by no means could be thought of as a pulp and paper plant. My impression was also that what for us might appear as a

descriptive frame, was interpreted by some of the insiders normatively - as a desire that the institute ought to become more like a production system.

Our plans for ISO followed in very much the same tracks as at the Institute of Anthropology. But it might be worth while to ponder over some of the differences. We started with aiming at a sort of methodic pragmatism by insisting that the formal demands of investigation methods were adapted to the project goal and resource limits - something which was done to avoid discussions concerning the degree of scientificness of the charting. We experienced several intimations that sociologists loved "poking into methods".

The administrative and scientific leadership at ISO took a very active stance towards the research team from WRI at the same time that they saw themselves as "marginalized" in the teacher's collegium. We had to keep on our toes all the while to avoid being drawn into an internal play - and in such situations we were obliged to plan our tactics so that the development work did not provoke unnecessary conflicts.

Our description of ISO was fed back during a two day workshop at which the whole staff and some of the student representatives were present. The format corresponds with what I have presented under my discussion of the dialogue conferences. There was a remarkable acceptance of the picture of the institute that we had drawn up. Several of the scientific staff amplified our conclusions and aired, among other things, Durkheim's concept of "anomie" to characterize what they felt to be a crumbled entity. On our part, we ventured to use a metaphor for ISO's working environment, "the doughnut", which goes back to Don A. Schön's tag with which he characterized WRI while he functioned as an external consultant for <u>our</u> institute. After a while, as the project went on, it occurred to us that we recognized ourselves in their way of organizing themselves. This we communicated to our commissioners who, perhaps, were not as interested in this parallell as we were.

During the two-day feedback conference, we received the impression that the teacher's collegium discovered a sense of communality which either had been lost or (for many) had never existed. The process of integration was made even more distinct in that influential persons brought forth visions concerning the discipline of sociology and the institute which signalled a more driving attitude to their surroundings and themselves. A clearer and more marked common will

emerged during the hectic activity of the two-day conference which resulted in 170 measures to be continued or initiated when the staff returned to the university. It turned out that it was difficult to transform that enthusiasm into direct actions and reports told of a certain amount of reticence directly after the conference. This "emptiness", however, disappeared after a while and a great deal had been put in motion by the time WRI arranged a follow-up conference in the autumn of 1988. It was claimed that ISO had become "more visible to itself and to the world around it" - a conclusion to which many voiced their agreement.

If we take the two university projects together, it seems that the work environment mapping - which, by the way, also was called "the organization examination" - at ISO played a distinctly subordinate role. This activity had partly a purely symbolic function - as a way of persuading people around that "something was being done", and at ISO it served the socio-technical conception of stressing the institute as an entity (a "production system"). The mapping process can also be be said to have had a ritual function in that it is an acceptable way of starting a development project, a fact which confirms the extent to which design thinking still exists.

While the project at the Institute of Social Anthropology followed, in the main, a linear movement such as I have described in Fig. 1, the ISO process was much less tidy - with iterating phases when goals had to be clarified, conflicts avoided or nipped in the bud, and periods of hectic activity alternating with periods of standstill, broad participation and many parallell activities on the one side, and narrow activation of the institute leadership or the contact group on the other.

Joint Localization of High-tech Industries. In 1987 cooperation between WRI and a small consultancy firm based in the south of Norway (Arendal) was established for which we received state funding to assist in the development of an expertise centre, the core of which was to consist of 3-4 high technology firms. These were to be gathered together in an industrial park which was being built at the time.

It turned out to be difficult to find a design basis for this project since nobody had provided problems, charting requirements etc. The job was reminiscent of WRI's ships' programme and its "starting-up conferences" intended to unite the crew on important principles for the future running of the ship which was about to be launched. Similarly, at this industrial estate, the initiators had imagined

that there would be "synergic effects" which would emerge from a job pool shared by the firms. What one had in mind was a sort of team-buildning similar to that found on ships or for leaders of more comprehensive projects in Norwegian oil industry. This turned out to be difficult to accomplish since no focal project had emerged during the phase of moving into the park. WRI worked in several ways and on several levels in this industrial estate. We took an active role in the development of a certain number of social activities which, after a while, bore fruit, and which created a background for the spontaneous formation of groups of skilled/professional persons. In some of these, common projects were established. Early on in the project we had attempted to devise a professional forum, but this was no great success, and several key persons also claimed that cooperation had to grow from the bottom upwards. I believe this tells us something of strategy development in high-tech companies - it brings to mind the university institutes in that the goals are defined by several key people and small groups and that the process of orchestrating these types of creative and disordered activities can be hard-going and hazardous. If it is so that the formation of strategies in companies of this type is a fragmented business on the level of professional personnel, the most dynamic network organizing will be based on a point of intersection between the personal and the professional - something which also is documented in Norwegian literature on school cooperation.

Instead of constructing common discussion and task-solving fora, we have gradually begun attempting to support concrete project activities - partly with advice on organization principles, going through rounds of goal clarification and discussions of systems for continual evaluation. We have plans for integrating the latter in what we call a "project workshop" which is intended both to develop participants' competance in creating inter-enterprize projects and to be a professional forum which follows up the projects which have been submitted.

	INDUSTRY	SHIP'S ORGANIZ-ATION	HI-TECH INDUSTRIES	UNI-VERSITY DEPART-MENTS	HOSPITAL WARDS
DESIGN APPROACH	Socio-technical analysis	Socio-technical analysis	Team building Development of local evaluation	Simplified socio-technical analysiss	Adapted socio-technical analysis Data feedback Develop-ment of local evaluation
DIA-LOGICAL APPROACH	Organizing joint commitees Dialogue conference Parallell activities Network development	Establishing planning fora Design conferences	Parallell activities Establishing fora	Dialogue conferences	Organizing joint commitee Establishing fora
LEARNING PER-SPECTIVE			Goal integration Project learning	Culture analysis Conflict management	Reform-ulation of social contract

Fig. 5. An overview over different methods of action research inprofessional work

A Summarizing Discussion of Action Research Strategies in Professional Work.

In figure 5 I have summarized a handful of WRI's action research projects in organizations with relatively highly educated labour forces. The picture could have been supplemented with work from public enterprize, the police and sheriff's service, journalists etc. since much of this type of action research seems quite clearly to follow the general movement in working life away from industry and towards service institutions and information based activities. It is, therefore, of fundamental interest to see to what extent strategies taken from industrial contexts can be transplanted into other types of enterprizes and institutions. The "methods" which are listed in Fig. 4 are only approximately pigeon-holed and are more suggestive of a direction than a strict classification. For example, the data feedback as a strategy for change or the development of internal evaluationsystems important elements when action research is framed withion a learning perspective[12].

I shall not ignore the possibility that the divisions in Fig. 4 also mirror differences in theoretical or professional points of view among WRI's researchers. What is, however, striking, is the number of "methods" from the design tradition and the dialogical approach which, in fact, have been tried out in profession work. But there are several important nuances which make the learning perspective especially topical. As will be seen in Fig. 4, there are no given standardized ways of working within this hermeneutic horizon. It has relevance for me because I wish to stress the need for greater reflexivity in the action research traditions which are sketched out here. There are many ways in which the "objectivist" design tradition and the "procedural" dialogue approach can be rendered insensitive and unreflected in relation to what they do.

Allow me first to refer to the democratic dialogue as an instrument of change. I shall not enter into a discussion of the linguistic/philosophical reasonings which have been implemented in, among others, Gustavsen's conceptual

[12] Entitlement to the name "pedagogical action research" in Norway is dependent on the fulfilment of three criteria: (1) It must be addressed to the society of researchers. (2) The work must consist of pedagogical activities, and (3) it should take place in educational institutions (Brock-Utne, 1979). Since the university projects which have been described above were concerned with the working environment of the staff, they do not filfill the second criterium. In these characterizations nothing is mentioned about the type of perspective even though it is intimated that pedagogical theory will be of greater relevance than in action research directed towards working life.

framework, but rather point out that the conference form presupposes that the workers clothe their experiences in a linguistic form which conforms to the setup. There is a good deal which indicates that the code they make use of in official connections is very different indeed from the language they use in their daily work. This results in the necessity of a translation which, to a great degree, will be governed by what the participants believe is expected of them. I believe that Elden & Levin (1991) are correct to warn against a type of "model power" in which the action researchers in the spirit of participatory design lay down the premisses for how the practitioners shall think of themselves and their future. This is especially serious, of course, if the researchers are not aware of such mechanisms.

It is quite possible that industrial workers' occupational experiences are underarticulated or that their job vernacular is not accepted in certain fora. This is a form of "tacit knowledge" (see Lahn, in print). On the other side, one may claim that among academically educated people, communicating with others is their job, something which can create a profession culture which has small interest in language's concrete reference. In addition, every occupational jargon will be simultaneously inclusive and exclusive so that the task of integrating profession practitioners will also mean that one must work with a language development where the different specialized groups' "tacit" preconceptions and egocentric speech are opened up to an explicating process. It is at this intersection that more confrontative methods such as Chris Argyris prescribes, will prove their suitability.

The situation for the industrial worker can be such that too few fora are available where questions and problems which pop up in daily travail can be discussed. Viewed in this light, it would be both sensible and right to extend such arrangements on the micro-level. In individual professional environments, the problem can, however, be that there are too many arenas which render numberless problems and premisses for solutions, but which do not manage to provide conclusions. As I already have mentioned, it is also possible to imagine that such institutions are loosely coupled systems (Weick, 1982) in which the employees are and should be dependent upon one another only to a slight degree. Preparing for a common investment must be done with care if one is to avoid appearing provocative - cp. the negative reaction to goal-management in the Norwegian university environment. As regards socio-technical thinking, this is a challenge in that its "alternatives to hierarchic organizations" often have an increased local integration. The same applies on an inter-organizational level where network building has been a main strategy. But as I have noted, the institutional establish-

ment of networks implies the dismantling of personal contact networks which are both more developing for the individual and more dynamic in an organisational connection.

The ability to achieve the same representative superstructure for the action research programmes which was usual in industrial activities may prove to be difficult when one moves over to a field characterized by power struggles between professions. WRI's ships' research show how problematical it is to develop a strategy for working life seen in isolation. The development task in professional work must be closely connected with the goals for the professions laid down by their respective unions since they often hold a powerful guiding hand over professional standards and roles, qualification demands, competence development, career arrangements - and, not least, the educational system. The strategy becomes thus more compartmentalized, perhaps branch directed, at the same time that it, more and more, must include connections between training and working life. In addition, the action researcher must be able to position him/herself within a rather unclear field of crossing and contiguous interests, something which, for its part, demands an increasing consciousness of the effect of what one does - a greater degree of reflexivity than what has been usual in "the Scandinavian model" for action research.

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